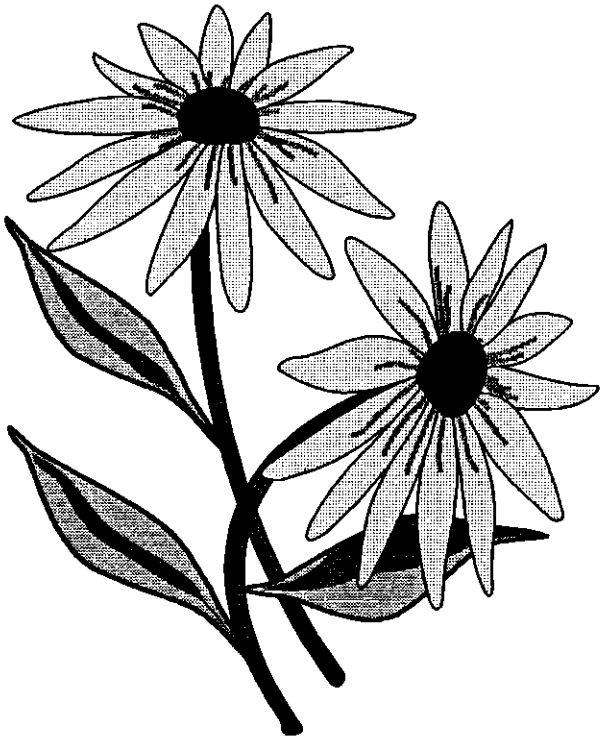
Special Status Plant Management



BLM Manual Handbook 6840-1

H-6840-1 - SPECIAL STATUS PLANT MANAGEMENT

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CHAPTER I

I. INTRODUCTION

This handbook provides direction on the management of special status plants. Special status plants are those plant species that are Federally listed as endangered or threatened, officially proposed for Federal listing as endangered or threatened, candidates for Federal listing as endangered or threatened, State listed as endangered, threatened, or rare, or listed as sensitive by the California State Director. The handbook expands on the policy elaborated in BLM Manual 6840 and California BLM Manual Supplement 6840.06 and establishes the procedures to be used in complying with that policy.

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CHAPTER II

II. PROCESS FOR DESIGNATING SENSITIVE PLANT SPECIES OR RECOMMENDING CHANGES IN STATUS

A. Designating Plant Species as Sensitive.

Pursuant to BLM Manual 6840 and California Manual Supplement 6840.06, the California State Director may designate plant species that do not fall into any of the other categories of special status species as sensitive species. Sensitive species are to be given the same level of protection as Federal candidate species. By policy (BLM Manual Supplement 6840.06) all plant species on List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere) of the most recent edition of the California Native Plant Society's *Inventory of Rare and Endangered Plants of California* that are on BLM lands or affected by BLM actions and that do not fall into one of the other categories of this section are designated as sensitive species in California. Exceptions are any such List 1B species that the State Director has specifically removed from the sensitive species list (see II.B. below). Other plant species may be designated as sensitive in accordance with the following procedure.

1. Requests to add plant species to the sensitive species list must be submitted in writing to the State Director. The requests must demonstrate clearly that designation of the species as sensitive is warranted. The request must be based on biological information for the species and its habitat and should detail threats or potential threats to the species and its habitat. The request must also detail how the special management afforded by designation will help the species.

2. Following review by the State Director the species is either designated as sensitive through Instruction Memorandum or California Manual Handbook Supplement or the request for designation is denied, in which case the State Director documents the reasons for denial in a memorandum to the District or Area Manager who initiated the request.

B. Removing Plant Species from the Sensitive Species List.

1. District and Area Managers may request that a plant species be removed from the sensitive species list. Such requests must be accompanied by evidence that demonstrates the species clearly does not merit sensitive species status. Requests must be based on biological information on the species and its habitat.

2. Following review by the State Director the species is either removed from the sensitive species list through Instruction Memorandum or California Manual Handbook Supplement or the request for removal is denied, in which case the State Director documents the reasons for denial in a memorandum to the District Manager or Area Manager who initiated the request.

C. Recommending Other Changes in Status.

1. Petitions to the Fish and Wildlife Service (FWS) to list or delist plant species.

a. Guidelines for petitioning the FWS to list or delist species are found in BLM Manual 6840.22B.

b. Only the State Director may submit petitions to FWS. District and Area Managers may request the State Director to submit a petition to list or delist a species. This request must be based solely on biological information on the species and its habitat and must address the five factors for listing included in section 4 of the Endangered Species Act (ESA). These factors are:

1). The present or threatened destruction, modification, or curtailment of its habitat or range.

2). Overutilization for commercial, recreational, scientific, or educational purposes.

3). Disease or predation.

4). The inadequacy of existing regulatory mechanisms.

5). Other natural or manmade factors affecting its continued existence.

c. Following review by the State Director the petition is either submitted to the FWS, with a copy of the transmittal memorandum forwarded to the District or Area Manager who submitted the request, or the request for petition is denied, in which case the State Director documents the reasons for denial in a memorandum to the District or Area Manager who initiated the request.

2. Requests to FWS to add or remove species from the list of candidate species.

a. The FWS periodically publishes in the *Federal Register* lists of species that are candidates for listing as threatened or endangered. This list changes depending on new information received by the FWS. The BLM may submit information on the status of candidate species and request that species be added to or removed from the candidate list as appropriate.

b. Only the State Director may submit requests to the FWS to add or remove species from the list of candidate species. District and Area Managers may request the State Director to submit a memorandum to the FWS to add or remove a species from the candidate species list. This request must be based solely on biological information on the species and its habitat and must address the five factors for listing included in section 4 of the Endangered Species Act and listed under II.C.1.b., above.

c. Following review by the State Director the request is either submitted to the FWS, with a copy of the transmittal memorandum forwarded to the District or Area Manager who submitted the request, or the request for change in candidate status is denied, in which case the State Director documents the reasons for denial in a memorandum to the District or Area Manager who initiated the request. The procedure for revising critical habitat designation is similar to the procedure for listing or delisting species.

3. Petitions to the State of California, Fish and Game Commission, to list or delist species.

a. Pursuant to the California Endangered Species Act, the BLM may submit petitions to the State of California, Fish and Game Commission, to list or delist a species.

b. Only the State Director may submit petitions to the Fish and Game Commission. District and Area Managers may request the State Director to submit a petition to list or delist a species. This request must include information regarding the population trend, range, distribution, abundance, and life history of a species, the factors affecting the ability of the population to survive and reproduce, the degree and immediacy of the threat, the impact of existing management efforts, suggestions for future management, and the availability and sources of information. The petition shall also include information regarding the kind of habitat necessary for species survival, a detailed distribution map, and any other factors deemed relevant.

c. Following review by the State Director the petition is either submitted to the Fish and Game Commission, with a copy of the transmittal memorandum forwarded to the District or Area Manager who submitted the request, or the request for petition is denied, in which case the State Director documents the reasons for denial in a memorandum to the District or Area Manager who initiated the request.

CHAPTER III

III. INVENTORY

A. Policy.

It is BLM policy to conduct inventories to determine the occurrence and status of all special status plant species on lands managed by BLM or affected by BLM actions. This includes pro-active inventories directed toward developing plans or determining the status of plant species, as well as inventories conducted to determine the impacts of BLM planned or authorized actions on any special status plants that might be within the area of a proposed project. Such inventories are to be conducted at the time of year when such plant species can be found and positively identified.

B. Definition and Purpose.

1. Inventory is the periodic and systematic collection of data on the distribution, condition, trend, and utilization of special status plant species (BLM Manual 6600).

2. Inventories are conducted for many reasons, including:

a. To determine the conservation status of a plant species.

b. To develop plans, including resource management plans, recovery plans, species management guides, habitat management plans, coordinated resource management plans, and others.

c. To ensure compliance with the National Environmental Policy Act and the Endangered Species Act by having sufficient information available to adequately assess the effects of proposed actions on special status plants. Assessments of the effects of these actions are documented in biological assessments (if the project involves Federally listed species and qualifies as a "major construction activity" as defined by the ESA) or biological evaluations (for projects involving other special status species and/or not qualifying as a major construction activity). See Section V. (Biological Assessments and Biological Evaluations).

d. To serve as a baseline for monitoring.

3. The specific objectives of an inventory can vary depending on the purpose for the inventory. For example, an inventory may seek to:

a. Locate all populations of a single rare plant species. This would be a logical objective if the purpose of the inventory is to determine the conservation status of a plant species or to develop a species management guide or habitat management plan.

b. Locate all populations of all special status plant species in one location. This would be the objective if the purpose of the inventory is to prepare a biological assessment or biological evaluation on the effects of a proposed action on all of the special status species in the project area.

c. Provide some measure of the viability of each population of a special status plant, either throughout the species' range or in a smaller area such as a proposed project area. For example, the inventory may seek to determine:

1). Numbers of genets or ramets of the special status plant within each population.

2). Numbers of plants by age or reproductive class (vegetative, flowering, fruiting).

3). Associated species.

4). Associated habitat features.

5). Visual disturbances/Current and potential threats.

C. Timing and Intensity of Inventory.

1. Prior to conducting inventories, two valuable sources (RareFind and the California Native Plant Society Electronic Inventory) should be researched to see if special status species are already known from the area. Inventories must be timed so that target plant species can both be located in the field and positively identified. Inventories conducted to determine the conservation status of individual species or to develop activity plans for individual species can easily be scheduled in advance. Inventories to determine the occurrence of *all* special status plant species in a given area (e.g., project area, planning area) are more problematic. Ideally the inventory can be scheduled in such a way that it will detect all such species present. There may be situations, however, when a single inventory at one point in time will not suffice (for example, when one special status plant species suspected of occurring in the area to be inventoried can only be found and identified in April, and another can only be located and identified in August). In these cases a second inventory effort must be scheduled. The second inventory, however, may be facilitated by the first, if potential sites for the late-flowering species are flagged during the

first inventory. If sufficient information is available on the habitat requirements of potentially occurring species (substrate, plant community, etc.), and the site in question is believed to be unsuitable for those species, a field visit should still be conducted to verify and document the reasons for believing the species to be absent. Ideally, prior to inventory known populations of the target species that occur in similar habitat conditions should be visited to determine growth conditions and phenology. The absence of certain species in the pre-survey may indicate that those species would not be apparent in the project area survey.

2. Intensity of inventory should be tied to the objectives of the inventory. If the objectives are to determine the conservation status of a single species, the inventory would likely focus on finding as many occurrences of the species as possible. Inventory efforts could be focused in only those areas and those habitats with the highest probability of finding the target species. If many occurrences are found through such an inventory effort, searching less likely habitat would be unnecessary. If, however, few occurrences are located, the decision might be made to expand the inventory to areas considered less likely to harbor the species. Intensity of inventories conducted to assess the impacts of BLM initiated or authorized actions must be based on both the probability of a special status plant occurring within the project area and the degree of habitat disturbance expected to result from the action. This is covered under III.E., below.

D. Qualifications of Personnel Conducting Inventories.

1. Ideally, all personnel conducting inventories for special status plants should have strong backgrounds in plant taxonomy, plant ecology, field sampling design and methods, and knowledge of the floras of the area to be inventoried. Such qualifications help to ensure that all special status plants occurring in the area to be inventoried will be located, including those that were not predicted to occur at the start of the inventory.

2. Focused inventories for one or a few species may be conducted by personnel not possessing all of the qualifications discussed above, as long as these personnel are adequately trained in the identification of the target species.

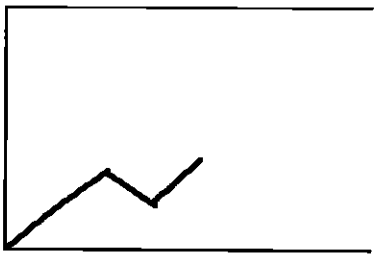
3. Non-BLM personnel conducting inventories on the public lands must meet the qualifications outlined in III.D.1., above. This is particularly important for inventories conducted to evaluate the impacts of projects on special status plants (see III.E., below).

E. Inventories to Ensure Compliance with the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and BLM Policy.

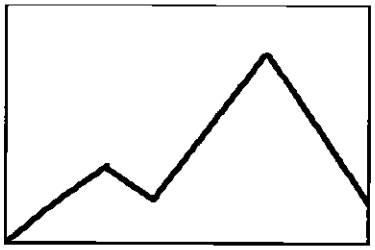
1. Five intensity levels of inventory are recognized for the purpose of complying with NEPA, the ESA, and BLM policy. These are described and illustrated in Figure III-1.

Figure III-1. Plant Inventory Intensity Levels

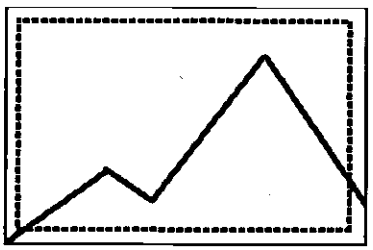
1. Field Check. The surveyor gives the area a quick "once-over" but does not walk completely through the project area. The entire project area has not been examined.



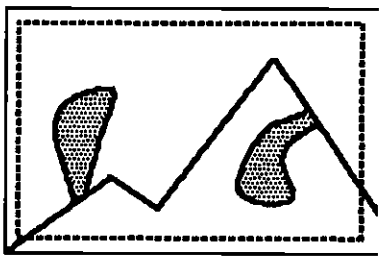
2. Cursory. The surveyor gives the area a quick "once-over" by walking through the project area. The entire project area has not been examined.



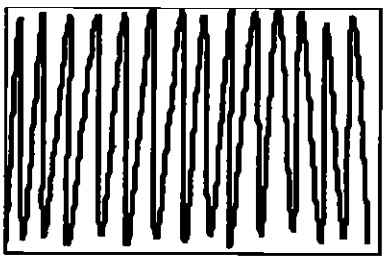
3. General. The surveyor gives the area a closer look by walking through the project area and perimeter or by walking more than once through the area. Most of the project area is examined.



4. Intuitive Controlled. The surveyor has given the area a closer look by conducting a complete inventory of a specific area after walking through the project area and perimeter or by walking more than once through the area. Most of the project area is examined.



5. Complete. The surveyor has walked throughout the project area until all of the area has been examined.



2. The minimum level of inventory required is a function of two factors: 1) the probability of occurrence of special status plants in the project area and 2) the level of habitat disturbance associated with the proposed action. Both of these factors are ranked as "Low," "Medium," or "High," based on the criteria given in Figure III-2. and Table III-1. The minimum level of inventory required is then determined by Table III-2.

Note that these are *minimum* levels of inventory. A more intensive inventory may be performed. If special status plant species are located during the inventory, a complete inventory must be conducted of the plant location(s) and potential habitat areas.

Also note that for Federally listed plant species, the minimum levels of inventory given above may not be adequate to make a "no effect" determination. Only if the BLM has determined that there is no probability of a listed plant occurring within the project area or has performed either a complete or intuitive controlled inventory with negative results can a "no effect" determination be made. A finding of "no probability" can be based on the project area's lying outside the known range of a listed plant species or on the fact that there is absolutely no suitable habitat for the species in the project area. Otherwise, the BLM must obtain the concurrence of the FWS that the minimum inventory level for a listed plant is adequate for a specific project.

Figure III-2. Probability of occurrence of special status plant species.

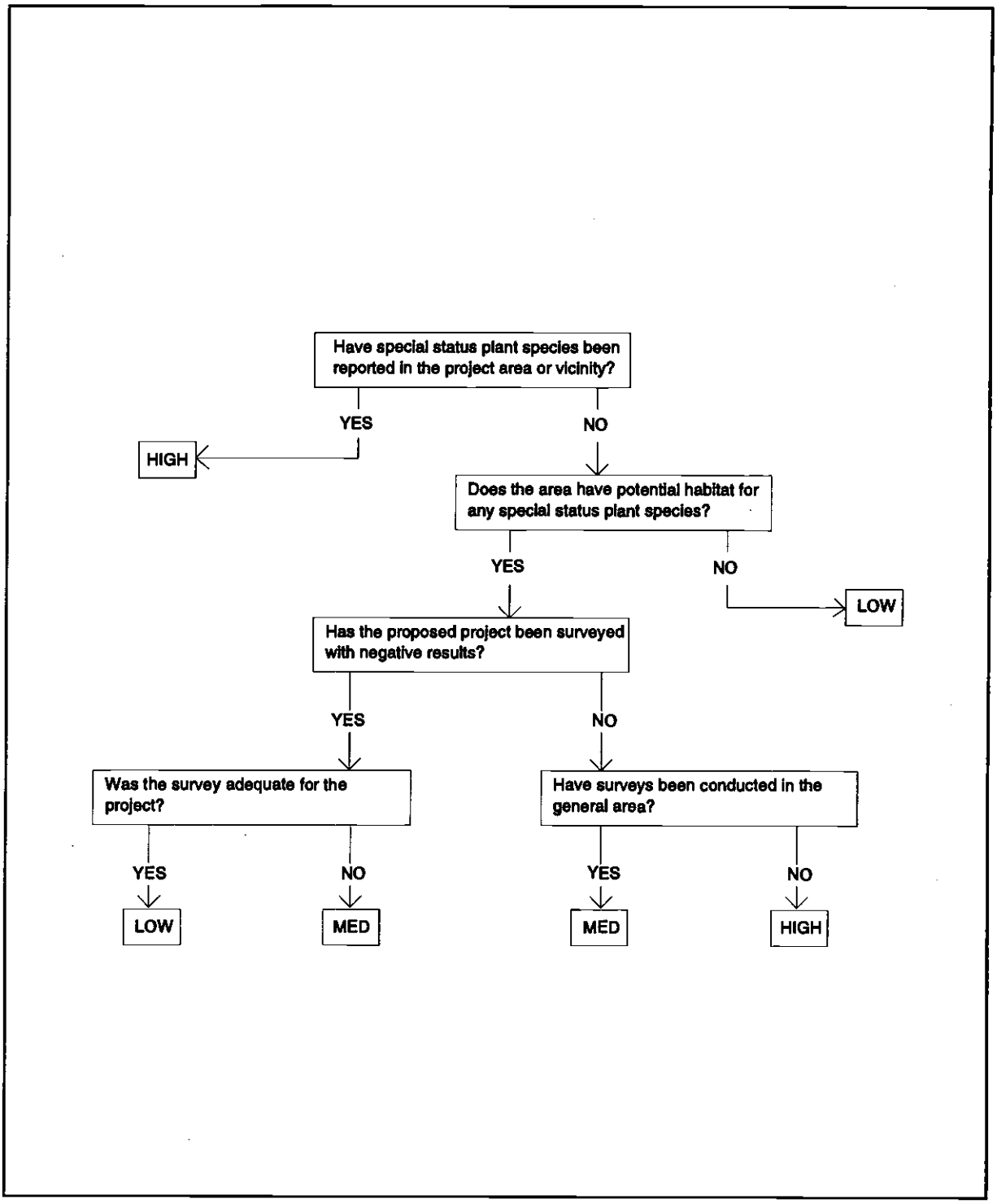


Table III-1. Potential for site disturbance from various actions.

Type of Project	Habitat Disturbance Level
Forest Management	
Large green sales (>500 mbf)	High
Small green sales (<500 mbf)	Medium to High
Salvage sales	Low to High depending on intensity
Commercial thinning sales	Medium to High
Rotary axe cutting (low ground pressure)	Low to Medium
Chainsaw cutting site prep & release	Low
Tractor piling	High
Chemical site prep & release (spot spray)	Low
Vegetation treatment (brush spraying, burn, etc.)	Medium to High
Ripping site prep	High
Cutting and grubbing release (normally 24" spot around tree)	Low
Planting	Low
Hand Piling	Low
Pile burning	Low
Broadcast or underburning	Low to Medium
Firewood cutting/green	Low to Medium
Firewood cutting/dead	Low to Medium
Road Construction and Maintenance	
Road construction	High

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Type of Project	Habitat Disturbance Level
Road maintenance	Low
Grazing Management	
Grazing permits/leases	Low to High depending on vulnerability of particular plant species
Fences	Low
Cattleguards	Low
Seedings	High
Vegetation treatments	Medium to High
Windmills	Low (for project construction; concentrated grazing that may result in vicinity of troughs Medium to High)
Water pipelines	Low to Medium (for project construction; concentrated grazing that may result in vicinity of troughs Medium to High)
Spring developments	Low to High
Reservoirs	High
Recreation Management	
OHVs - play use	Medium to High
OHVs - ancillary use	Low
Facility construction	High
Back country use (hiking, mountain biking, horseback riding, hunting, river running, etc.)	Low
Facility maintenance	Low
Toilet or minor facility placement	Low

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Type of Project	Habitat Disturbance Level
Cultural Resource Management	
Subsurface data recovery - sampling	Low (coring) to Medium (trenching)
Subsurface data recovery - 100 percent	High
Public Land Disposals	High
Rights-of-Way Permits	
Gas/Oil pipelines	Medium to High
Buried cables	Medium to High
Transmission lines	Medium to High
Wind energy development	High
Hydro development	Medium to High
Communication sites	High
Access/with road construction	High
Access/existing road	Low
Desert land entries	High
Fire Management	
Fire breaks - Tractor	High
Fuel breaks - Shaded (cut & burn)	Low to Medium
Prescribed burning	Low to High
Fire rehabilitation	Low to High
Retardent drops	Low to Medium

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Type of Project	Habitat Disturbance Level
Mineral Resource Management	
Fluids (Oil and Gas and Geothermal)	
Surface use plans for applications for permits to drill (APDs)	High
Surface use plan amendment	High
Sundry notices	Low to High
Geophysical exploration	Low to High
Pipelines	Low to High
Transmission lines	Medium to High
Power plant site	High
Solids	
Mining notices (43 CFR 3809)	Medium to High
Mining plans of operation (includes all forms of hardrock exploration and development)	Medium to High
Exploration plan for mineral material (43 CFR 3600)	Low to Medium
Exploration plan for hardrock leasing	Medium to High
Exploration plan for acquired lands (43 CFR 3500)	Medium to High
Soil Sampling	Low (coring) to High (trenching)

Type of Project	Habitat Disturbance Level
Wildlife Management	
Guzzlers	Low
Wildlife reintroductions	Low
Chaining	Low to High
Stream restoration	Low to High
Wetland restoration	Low to High

Table III-2. Determining minimum intensity of inventory based on habitat disturbance level and probability of occurrence of special status plants.

Habitat Disturbance Level	Probability of Occurrence	Minimum Intensity of Inventory
High	High	Complete or Intuitive Controlled
Medium	High	Complete or Intuitive Controlled
High	Medium	General
Low	High	General
High	Low	Field Check
Medium	Medium	Cursory
Low	Medium	Cursory
Medium	Low	None
Low	Low	None

3. Many special status plant inventories of public lands conducted to assess the impacts of a project are performed by consultants hired by project proponents. These inventories must meet or exceed the intensity level demanded by the project (III.E.2., above). Personnel conducting the inventory must meet the qualifications outlined in III.D.1., above. In order for the BLM to adequately determine the quality of such third party inventories the following information is required from the consultant or project proponent (these are adapted from the recommendations of the California Native Plant Society [CNPS] and the California Department of Fish and Game as given in CNPS's *Inventory of Rare and Endangered Vascular Plants of California*, Fourth Edition, February, 1994):

a. Project description, including a detailed map of the project location and study area.

b. A written description of the biological setting, referencing the plant community nomenclature used and a vegetation map.

c. A detailed description of the inventory methodology, including maps showing areas actually searched.

d. The dates of field visits.

e. The results of the inventory, including detailed maps.

f. An assessment of potential impacts.

g. A discussion of the importance of any special status plant occurrences found, with consideration for other nearby occurrences, and the distribution of the species as a whole.

h. Recommended mitigation measures to reduce impacts.

i. A complete list of *all* plant species (not just special status species) identified within the project area.

j. Copies of all Field Survey Forms, for all special status plant occurrences found, or Natural Community Field Survey Forms, for any unusual communities found (these forms are discussed in detail under III.F., below).

k. The name(s) and qualifications of the persons conducting the inventory.

l. A list of references cited, persons contacted, and herbaria visited.

m. Note whether voucher specimens (where their collection will not adversely impact special status plants) of special status species were deposited in a major herbarium.

F. Documenting the Results of Inventory.

1. The results of special status plant inventories should be well documented. This documentation must include, as a minimum, the completion and submission of Field Survey Forms and mapped occurrences on xeroxed 7.5' topos for all special status plants found by BLM personnel or consultants. Occurrences are defined by CNDDB as being separated from other plant locations by 1/4 mile. These forms are submitted to the California Natural Diversity Data Base (CNDDB) at the following address:

California Department of Fish and Game
Natural Heritage Division
Natural Diversity Data Base
1416 9th Street
Sacramento, CA 95814

Copies of the Field Survey Form are available from the CNDDB at the same address. They will also provide xeroxed parts of topo maps if needed. An example of the form is given as Illustration 1.

2. If the inventory discovers any unusual plant communities, a Natural Community Field Survey Form must be completed for each such community and sent to the CNDDB at the above address. Illustration 2. is an example of this form.

3. A written report documenting results should be prepared for most inventories. Such a report should include the following:

a. Detailed maps of the areas inventoried and the special status plants and unusual plant communities found. Base maps used should be 7½ minute USGS quadrangles. Such information should be entered into a geographical information system (GIS) at the earliest opportunity. Global positioning systems, if available, can be used to accurately determine locations of occurrences and to record these for input into GIS.

b. Written descriptions of the areas inventoried, including the plant communities present.

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California Native Species Field Survey Form ILLUSTRATION 1

Mail to:
Natural Diversity Data Base
California Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, California 95814

For office use only
Source Code _____ Quad Code _____
Elm Code _____ Occ # _____
Copy to _____ Map Index # _____

Date of field work ___ mo ___ day ___ year

Scientific Name:
Common Name:

Species Found? ☐ yes ☐ no _____ *If not, why?*
Total # Individuals _____ Subsequent visit? ☐ yes ☐ no
Is this an existing NDDB occurrence? _____ ☐ no ☐ unk.
Yes, Occ. #
Collection? If yes: _____ number _____ Museum/Herbarium

Reporter: _____
Address: _____
_____
Phone: ( ) _____

Plant Information
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information
Age Structure: _____ # adults _____ # juveniles _____ # unknown
☐ nesting ☐ breeding ☐ foraging ☐ wintering ☐ roosting ☐ burrow site ☐ other

Location (Please also attach or draw map on back.)
County: _____ Landowner/Mgr: _____
Quad Name: _____ Elevation: _____ UTM: _____
T R ¼ of ¼ Sec T R ¼ of ¼ Sec

Habitat Description (Plant communities, dominants, associates, substrate/soils, aspects/slope)
Other rare spp.?

Site Information Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☐ Poor
Current/surrounding land use:
Visible disturbances, possible threats:
Comments:

Determination: (Check one or more, fill in the blanks)
___ Keyed in a site reference: _____
___ Compared with specimen housed at: _____
___ Compared with photo/drawing in: _____
___ By another person (name): _____
___ Other: _____

Photographs: (Check one or more) Slide Print
Plant/animal ___ ___
Habitat ___ ___
Diagnostic Feature ___ ___
May we obtain duplicates at our expense? ☐ Yes ☐ No

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California Natural Community Field Survey Form

ILLUSTRATION 2

Mail to:
Natural Diversity Data Base
California Dept. of Fish and Game
1416 Ninth Street
Sacramento, CA 95814
(916) 324-6857

For office use only
Source Code_____ Quad Code_____
Community Code _____ Occ #_____
Map Index #_____ Update Y _____ N _____

Please provide as much of the following information as you can. Please attach a map (if possible, based on the USGS 7.5 minute series) showing the site's location and boundaries. Use the back if needed.

Community name:_____

Reporter:_____ Phone _____
Affiliation and Address_____
Date of field work:_____ County:_____
Location:_____

Quad name: _____T____R ____ ____ ¼ of___ ¼ sec_____ Meridian_____
UTM Zone __ __ Northing __ __ __ __ __ __ __ Easting __ __ __ __ __ __
Landowner/Manager: _____ Photographs: Slide ☐ Print ☐
Elevation: _____Aspect: _____ Slope (indicate % or °)_____ Drainage:_____
Site acreage: _____ Evidence of disturbance/threats: _____

Current land use: _____
Substrate/Soils: _____

General description of community: _____

Any Special Plants or Animals present: _____

Successional status/Evidence of regeneration of dominant taxa:_____

Overall site quality: Excellent____ Good ____Fair ____Poor ____Comments: _____

Basis for report: Remote image ____Binocular/Telescopic survey _____
Windshield survey ____ Brief walk-thru ____ Detailed survey ____ Other _____
Relevé: In the space below, indicate each species cover % within the following growth form categories:

Trees	Shrubs	Herbs/Graminoids

Continue on back if needed. Thank you for your contribution.

CHAPTER IV

IV. MONITORING.

A. Monitoring Priority

1. Although all species should be monitored at some level, some species require more intensive monitoring than others. Decisions on prioritizing sensitive species for monitoring should be based upon degrees of rarity, existing threats, and potential conflict. Existing threats include management actions, declining or widely fluctuating populations, and poor or changing habitat. Potential conflict should take into account future management actions and Bureau/public interest.

2. The following rating system is for determining monitoring priority for listed and proposed plant species. If a species is included in an existing activity plan that calls for a certain level of monitoring, then its rank should be increased as needed. Note that these are minimum monitoring standards. More intensive and/or more frequent monitoring may be required for particular plant species and situations.

Level of existing threats on BLM land

2 pts	high
1 pt	medium
0 pts	low

Number of known occurrences on BLM land

2 pts	< 5 occurrences
1 pt	6-20 occurrences
0 pts	> 20 occurrences

Degree of potential conflict

2 pts	high
1 pt	medium
0 pts	low or absent

RATING	MINIMUM MONITORING LEVEL
5 or 6 points	Annual quantitative monitoring*
3 or 4 points	Quantitative monitoring every three years*
1 or 2 points	Fill out Field Survey Form every five years

* Quantitative monitoring is more time-consuming and expensive than qualitative monitoring, but is usually appropriate for high priority listed and proposed plant species. In some cases, however, qualitative monitoring may not be appropriate even for these high priority species. There may be situations, for example, where the physical act of quantitative monitoring may have unacceptable adverse effects on a population. Decisions not to conduct quantitative monitoring on these high priority plant species should be documented in writing and approved by the State Director.

Demographic monitoring is the most intense level of monitoring because it involves marking and tracking the fate of individuals through time. For those high priority plant species that are amenable to demographic monitoring (these are typically perennial plants without long-lived seedbanks), the use of demographic techniques should be strongly considered because they allow for more powerful evaluations of the effects of management decisions on the viability of these plants.

B. Quantitative Monitoring Studies

1. Quantitative monitoring studies require that some attribute of the target plant species be *measured*. Often this means that the number of individuals is counted (either in total or by size class), but it can also mean that the size (height, cover, or both) of individual plants is measured or that the number of flowers and or seeds is counted.

2. It is possible to take *all* of the possible measurements at a given site (for example, the observer is interested in determining the change over time in the number of plants at a site and *all* of the plants at the site are counted each time the site is monitored). In this case no statistical analysis is required and any change observed is real (assuming no measurement errors occur).

3. Often it is not feasible or efficient to take all of the possible measurements and *sampling* is required. When this is the case, some form of *random* sampling must be used and

the data subjected to statistical analysis.

4. It is vital that a monitoring study plan be developed for each plant species monitored. The study plan, at a minimum, needs to include the following components:

a. Species and sites to be monitored

b. Management objectives

c. Monitoring objectives

d. Actions to be taken if management objectives are not met.

e. Study design

f. Method of analysis

5. The study plan should be circulated for review among co-workers, managers, other botanists, and other interested parties prior to conducting the monitoring.

6. The results of each monitoring study should be documented in periodic (ideally annual) reports. A non-technical summary report should be prepared for managers and the public. A technical report should be prepared and circulated to botanists and other interested specialists.

7. Refer to the BLM Technical Reference on Monitoring Special Status Plants for critical information on designing effective monitoring studies.

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CHAPTER V

V. BIOLOGICAL ASSESSMENTS AND BIOLOGICAL EVALUATIONS.

A. Biological Assessments.

A Biological Assessment is required for "a construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act." (50 CFR 402.02). A Biological Assessment is a document that evaluates the potential effects of the action on listed and proposed species and designated or proposed critical habitat. The primary purpose of the Biological Assessment is to determine whether any listed species or designated critical habitats are likely to be adversely affected by the action and whether formal Section 7 consultation or conference is necessary. If only proposed species or proposed critical habitat occur in the project area then formal consultation is not required, although conference may be required. Guidance concerning the subjects to be addressed in the Biological Assessment is provided in 50 CFR 402.12(f). A species list is required for all Biological Assessments. The species list for the project area can be obtained from the Service, or a list of species may be provided to the Service for written concurrence. The Assessment must identify and evaluate effects on all listed and proposed species that may occur in the project area. The Biological Assessment should be initiated within 90 days after receipt of the species list, and completed within 180 days after receipt. If this timeframe is exceeded, an updated species list should be requested or submitted.

B. Biological Evaluations

Biological Evaluations are similar to Biological Assessments, however there is no 180 day timeframe and the Evaluation can be in the form of a report or other document. Biological Evaluations are prepared for any actions that are not major construction activities but are within the range of listed or proposed species or designated critical habitats. They are also prepared to evaluate the effects of actions on other special status plant species. The only difference between these two types of Biological Evaluation is that Biological Evaluations concluding that an action may affect a listed or proposed species (or critical habitat) are forwarded to the FWS as part of a Section 7 consultation or conference, whereas Biological Evaluations concluding that an action may affect other special status plants are not part of a formal consultation or conference with the FWS. Biological Evaluations that conclude that an action is likely to adversely affect a candidate plant species must be sent to the FWS as part of a request for technical assistance (see BLM Manual 6840.06C3) in order to receive FWS concurrence that the action will not contribute to the need to list. For actions affecting Federally listed or proposed species, Biological Evaluations should contain the same level of

detail as Biological Assessments. For other special status plants Biological Evaluations may not require the same level of detail depending on the nature of the action, but the information described below should be used as a guide.

C. General

The documentation of project effects on special status plant species that is normally provided in a separate and distinct document (Biological Assessment or Biological Evaluation) may be consolidated into a NEPA document, provided that (for listed or proposed plants or critical habitat) all of the substantive and information requirements of Section 7 of the ESA are met. See 50 CFR 402.06 for details concerning how the consultation, conference, and biological assessment procedures may be coordinated with other environmental reviews. While there are no strict requirements for Biological Assessments and Evaluations, the following information should be included. For more guidance concerning the contents of Biological Assessments, refer to 50 CFR 402.12(f). See Figure V-3. for information on the steps required for Biological Assessments/Evaluations.

1. Description of Proposed Action

This should include the project location, a map of project area, and a description of the project and when it will occur.

2. Prefield Review

This section should include a list of all potential special status plant species in the project area and their potential habitat areas, the identification and description of any occupied habitats or potential habitats that are unoccupied, and a discussion of any past reports or surveys of the project area.

3. Field Reconnaissance

Describe the survey methods and results.

4. Analysis and Recommendations

Give an analysis of the effects of the action (or of each project alternative) that would directly, indirectly, or cumulatively affect the species, plus an analysis of the effects of interdependent actions (e.g. construction of a road and maintenance of the road) on listed species and critical habitat.

Findings of "no effect" do not require written concurrence from FWS, but a copy of the Biological Assessment or Biological Evaluation should still be provided.

Findings of "beneficial effect" must have written concurrence from FWS and possible formal consultation.

Findings of "not likely to adversely affect" require the written concurrence of FWS and usually an informal consultation.

Findings of "may adversely affect" require formal section 7 consultation with FWS unless the proposed action can be modified before consultation is initiated.

For proposed species or critical habitat, findings of "may adversely affect" require a "conference" with FWS.

5. Recommendations

Specific recommendations for eliminating or compensating for any adverse effects (for each project alternative) should be included, such as timing or access restrictions. These recommendations may be developed with the help of FWS in an informal consultation.

6. References

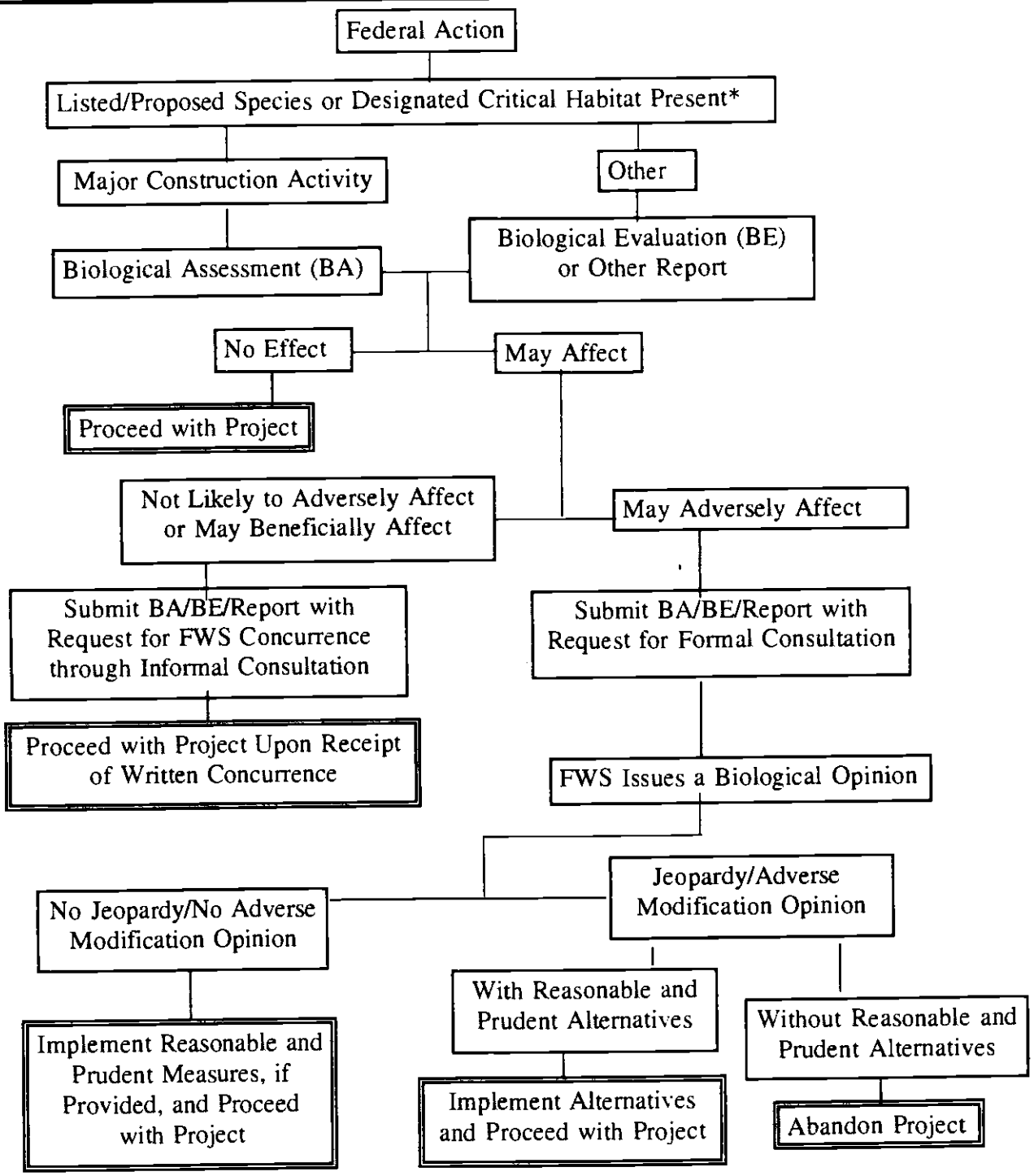
Include all contacts, contributors, literature, etc.

D. Biological Opinions

After receiving and analyzing the Biological Assessment or Biological Evaluation FWS will issue a Biological Opinion as to whether there will be "jeopardy" to the species or "adverse modification" to critical habitat. Most findings of "jeopardy" are accompanied by reasonable and prudent alternatives that would allow the project to proceed. If no reasonable and prudent alternatives can be agreed upon, the proposed project must be abandoned. While Federal agencies, the Governor, or a permit or license applicant may apply for an exemption for an agency action, this has rarely been done in the past.

FWS often includes Conservation Recommendations with a Biological Opinion that concludes there will be no jeopardy to the species. Although these are not binding, it is BLM policy to implement all of these recommendations unless there are compelling reasons not to do so. These reasons should be committed to writing and a copy forwarded to the State Director. Unlike animals, there are no incidental take provisions for plants under the ESA.

Figure V-3. Flow chart for Biological Assessments/Evaluations



*Assume the species is present if its habitat is present. Remember that for many plant species, especially annuals, surveys can only prove presence - not absence. Always consider potential impacts to a species if its habitat is present.

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BUREAU OF LAND MANAGEMENT

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Subject H-6840-1 - Special Status Plant Management

1. Explanation of Material Transmitted: The material contained in this Handbook complements Manual 6840 and gives guidance for the management of Special Status Plants in California.

2. Reports Required: None.

3. Material Superseded: None.

4. Filing Instructions: File as directed below.

REMOVE:	INSERT:
None	H-6840-1

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Ae Wright
ASSOCIATE STATE DIRECTOR